IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A method of controlling drive of an endless belt by controlling rotation of, from among a plurality of rotary support bodies over which said endless belt is passed, a drive rotary support body to which drive torque is transferred, said method comprising ~~the steps of~~:

(a) detecting an angular displacement or an angular velocity of~~, among said plurality of rotary support bodies,~~ a driven rotary support body, from among said plurality of rotary support bodies, not contributing to transfer of the drive torque;

(b) separating, from the angular displacement or the angular velocity detected, an AC (alternating current) component of the angular displacement or the angular velocity having a frequency that corresponds to a periodic thickness variation of said belt in a circumferential direction; and

(c) controlling the rotation of said drive rotary support body in accordance with an amplitude and a phase of the AC component.

Claim 2 (Currently Amended): The method as claimed in claim 1, wherein ~~step~~ the separating (b) comprises ~~(d)~~ separating a plurality of AC components corresponding to the periodic variation of said belt and different in frequency from each other, and

~~step~~ the controlling (c) comprises ~~(e)~~ controlling the rotation of said drive rotary support body in accordance with the plurality of AC components.

Claim 3 (Currently Amended): The method as claimed in claim 1, further comprising:

~~(f)~~ (d) executing test drive that causes said drive rotary support body to rotate at a constant angular velocity by using a reference mark provided on said belt as a reference;

~~(g)~~ (e) storing information representative of the amplitude and the phase of the AC component appeared over at least one period of the thickness variation of said belt in the circumferential direction during the test drive;

~~(h)~~ (f) generating a target reference signal on the basis of a result of detection of the reference mark and the information stored; and

~~(i)~~ (g) controlling the rotation of said drive rotary support body in accordance with a result of comparison of the target reference signal and the AC component.

Claim 4 (Currently Amended): The method as claimed in claim 3, wherein ~~step~~ the separating (b) comprises ~~(d)~~ separating a plurality of AC components corresponding to the periodic variation of said belt and different in frequency from each other, and

~~step~~ the controlling (c) comprises ~~(e)~~ controlling the rotation of said drive rotary support body in accordance with the plurality of AC components.

Claim 5 (Currently Amended): The method as claimed in claim 1, further comprising:

~~(j)~~ (d) executing test drive of said belt while varying an amplitude and a phase of a reference signal used to control the rotation of said drive rotary support body;

~~(k)~~ (e) setting the amplitude and the phase of the reference signal such that a difference between the AC component produced during the test drive and said reference signal becomes minimum; and

~~(l)~~ (f) controlling the rotation of said drive rotary support body in accordance with a result of comparison or the reference signal, which is generated to have the amplitude and the phase set by the test drive, and the AC component.

Claim 6 (Currently Amended): The method as claimed in claim 5, wherein ~~step~~ the separating (b) comprises ~~(d)~~ separating a plurality of AC components corresponding to the periodic variation of said belt and different in frequency from each other, and

~~step~~ the controlling (c) comprises ~~(e)~~ controlling the rotation of said drive rotary support body in accordance with the plurality of AC components.

Claim 7 (Currently Amended): The method as claimed in claim 1, further comprising:

~~(m)~~ (d) processing the AC component by taking account of a radius of said driven rotary support body, an effective belt thickness which is a reference for a speed at which part of said belt contacting said driven rotary support body moves, a radius of said drive rotary support body, an effective belt thickness which is a reference for a speed at which part of said belt contacting said drive rotary support body moves, and a period of time necessary for said belt to move from a center of a portion where said belt and said driven rotary support body contact to a center of a portion where said belt and said drive rotary support body contact.

Claim 8 (Currently Amended): The method as claimed in claim 7, wherein ~~step~~ the separating (b) comprises ~~(d)~~ separating a plurality of AC components corresponding to the periodic variation of said belt and different in frequency from each other, and

~~step~~ the controlling (c) comprises ~~(e)~~ controlling the rotation of said drive rotary support body in accordance with the plurality of AC components.

Claim 9 (Currently Amended): The method as claimed in claim 7, further comprising:

~~(f)~~ (e) executing test drive that causes said drive rotary support body to rotate at a constant angular velocity by using a reference mark provided on said belt as a reference;

~~(g)~~ (f) storing information representative of the amplitude and the phase of the AC component appeared over at least one period of the thickness variation of said belt in the circumferential direction during the test drive;

~~(h)~~ (g) generating a target reference signal on the basis of a result of detection of the reference mark and the information stored; and

~~(i)~~ (h) controlling the rotation of said drive rotary support body in accordance with a result of comparison of the target reference signal and the AC component.

Claim 10 (Currently Amended): The method as claimed in claim 9, wherein ~~step~~ the separating (b) comprises ~~(d)~~ separating a plurality of AC components corresponding to the periodic variation of said belt and different in frequency from each other, and

~~step~~ (c) the controlling comprises ~~(e)~~ controlling the rotation of said drive rotary support body in accordance with the plurality of AC components.

Claim 11 (Currently Amended): The method as claimed in claim 7, further comprising:

~~(j)~~ (e) executing test drive of said belt while varying an amplitude and a phase of a reference signal used to control the rotation of said drive rotary support body;

~~(k)~~ (f) setting the amplitude and the phase of the reference signal such that a difference between the AC component produced during the test drive and said reference signal becomes minimum; and

~~(l)~~ (g) controlling the rotation of said drive rotary support body in accordance with a result of comparison of the reference signal, which is generated to have the amplitude and the phase set by the test drive, and the AC component.

Claim 12 (Currently Amended): The method as claimed in claim 11, wherein ~~step~~ the separating (b) comprises ~~(d)~~ separating a plurality of AC components corresponding to the periodic variation of said belt and different in frequency from each other, and

~~step~~ the controlling (c) comprises ~~(e)~~ controlling the rotation of said drive rotary support body in accordance with the plurality of AC components.

Claim 13 (Currently Amended) ~~In a~~ A device for controlling drive of an endless belt by controlling rotation of, from among a plurality of rotary support bodies over which said endless belt is passed, a drive rotary support body to which drive torque is transferred, comprising:

control means ~~detects~~ for detecting an angular displacement or an angular velocity of~~,~~ ~~among said plurality of rotary support bodies,~~ a driven rotary support body, from among said plurality of rotary support bodies, not contributing to transfer of the drive torque, ~~separates~~ for separating, from said detected angular displacement or said angular velocity, ~~detected an~~ AC (alternating current) component of said angular displacement or said angular velocity having a frequency that corresponds to a periodic thickness variation of said endless belt in a circumferential direction, and for controlling ~~controls~~ the rotation of said drive rotary support body in accordance with an amplitude and a phase of said AC component.

Claim 14 (Original): The device as claimed in claim 13, wherein said control means is configured to separate a plurality of AC components corresponding to the periodic variation of said belt and different in frequency from each other and control the rotation of said drive rotary support body in accordance with said plurality of AC components.

Claim 15 (Original): The device as claimed in claim 13, wherein said control means is configured to execute test drive that causes said drive rotary support body to rotate at a constant angular velocity by using a reference mark provided on said belt as a reference, store information representative of the amplitude and the phase of the AC component appeared over at least one period of the thickness variation of said belt in the circumferential direction during said test drive, generate a target reference signal on the basis of a result of detection of said reference mark and said information stored, and control the rotation of said drive rotary support body in accordance with a result of comparison of said target reference signal and said AC component.

Claim 16 (Original): The device as claimed in claim 15, wherein said control means is configured to separate a plurality of AC components corresponding to the periodic variation of said belt and different in frequency from each other and control the rotation of said drive rotary support body in accordance with said plurality of AC components.

Claim 17 (Currently Amended): The device as claimed in claim 13, wherein said control means is configured to execute test drive of said belt while varying an amplitude and a phase of a reference signal used to control the rotation of said drive rotary support body, set the amplitude and the phase of the reference signal such that a difference between the AC

component produced during said test drive and said reference signal becomes minimum, and ~~controls~~ control the rotation of said drive rotary support body in accordance with a result of comparison of said reference signal, which is generated to have the amplitude and the phase set by said test drive, and said AC component.

Claim 18 (Original): The device as claimed in claim 17, wherein said control means is configured to separate a plurality of AC components corresponding to the periodic variation of said belt and different in frequency from each other and control the rotation of said drive rotary support body in accordance with said plurality of AC components.

Claim 19 (Original): The device as claimed in claim 13, wherein said control means is configured to process the AC component by taking account of a radius of said driven rotary support body, an effective belt thickness which is a reference for a speed at which part of said belt contacting said driven rotary support body moves, a radius of said drive rotary support body, an effective belt thickness which is a reference for a speed at which part of said belt contacting said drive rotary support body moves, and a period of time necessary for said belt to move from a center of a portion where said belt and said driven rotary support body contact to a center of a portion where said belt and said drive rotary support body contact.

Claim 20 (Original): The device as claimed in claim 19, wherein said control means is configured to separate a plurality of AC components corresponding to the periodic variation of said belt and different in frequency from each other and control the rotation of said drive rotary support body in accordance with said plurality of AC components.

Claim 21 (Original): The device as claimed in claim 19, wherein said control means is configured to execute test drive that causes said drive rotary support body to rotate at a constant angular velocity by using a reference mark provided on said belt as a reference, store information representative of the amplitude and the phase of the AC component appeared over at least one period of the thickness variation of said belt in the circumferential direction during said test drive, generate a target reference signal on the basis of a result of detection of said reference mark and said information stored, and control the rotation of said drive rotary support body in accordance with a result of comparison of said target reference signal and said AC component.

Claim 22 (Original): The device as claimed in claim 21, wherein said control means is configured to separate a plurality of AC components corresponding to the periodic variation of said belt and different in frequency from each other and control the rotation of said drive rotary support body in accordance with said plurality of AC components.

Claim 23 (Currently Amended): The device as claimed in claim 19, wherein said control means is configured to execute test drive of said belt while varying an amplitude and a phase of a reference signal used to control the rotation of said drive rotary support body, set the amplitude and the phase of the reference signal such that a difference between the AC component produced during said test drive and said reference signal becomes minimum, and ~~controls~~ control the rotation of said drive rotary support body in accordance with a result of comparison of said reference signal, which is generated to have the amplitude and the phase set by said test drive, and said AC component.

Claim 24 (Original): The device as claimed in claim 23, wherein said control means is configured to separate a plurality of AC components corresponding to the periodic variation of said belt and different in frequency from each other and control the rotation of said drive rotary support body in accordance with said plurality of AC components.

Claim 25 (Currently Amended): A belt device comprising:

an endless belt passed over a plurality of rotary support bodies;

a drive source configured to output drive torque for driving said endless belt;

sensing means for sensing an angular displacement or an angular velocity of, from among said plurality ~~or~~ of rotary support bodies, a driven rotary support body not contributing to transfer of the drive torque; and

a belt drive control device configured to control, based on an output of said sensing means, rotation of~~, among said plurality of rotary support bodies,~~ a drive rotary support body, from among said plurality of rotary support bodies, to which the drive torque is transferred from said drive source, thereby controlling drive of said endless belt;

said belt drive control device comprising:

control means for separating, from the angular displacement or the angular velocity sensed by said sensing means, an AC (alternating current) component of said angular displacement or said angular velocity having a frequency that corresponds to a periodic thickness variation of said endless belt in a circumferential direction, and controlling the rotation of said drive rotary support body in accordance with an amplitude and a phase of said AC component.

Claim 26 (Original): The device as claimed in claim 25, wherein said drive rotary support body and said driven rotary support body have a same radius.

Claim 27 (Original): The device as claimed in claim 26, wherein a distance by which said belt moves from a center of a portion where said belt and said driven rotary support body contact to a center of a portion where said belt and said drive rotary support body contact is an odd multiple of a length corresponding to one-half of a period of the thickness variation of said belt in the circumferential direction.

Claim 28 (Original): The device as claimed in claim 25, wherein said drive rotary support body and said driven rotary support body are different in radius from each other, and

a distance by which said belt moves from a center of a portion where said belt and said driven rotary support body contact to a center of a portion where said belt and said drive rotary support body contact is an even multiple of a length corresponding to one-half of a period of the thickness variation of said belt in the circumferential direction.

Claim 29 (Original): The device as claimed in claim 25, wherein said sensing means is mounted on one of a plurality of driven rotary support bodies located at a position little susceptible to the thickness variation ascribable to temperature.

Claim 30 (Original): The device as claimed in claim 25, wherein said belt comprises a photoconductive belt for use in an image forming apparatus.

Claim 31 (Original): The device as claimed in claim 25, wherein said belt comprises an intermediate image transfer belt for use in an image forming apparatus.

Claim 32 (Original): The device as claimed in claim 25, wherein said belt comprises a belt included in an image forming apparatus for conveying a recording medium to a position where an image is to be transferred from an image carrier to said recording medium.

Claim 33 (Original): The device as claimed in claim 25, wherein said belt comprises a belt included in an image forming apparatus for conveying a recording medium to a position where an image is to be transferred from an intermediate image transfer body to said recording medium.

Claim 34 (Currently Amended): An image forming apparatus comprising:

an image carrier comprising an endless belt passed over a plurality of rotary support bodies;

latent image forming means for forming a latent image on said image carrier;

developing means for developing the latent image to thereby produce a corresponding toner image;

image transferring means for transferring the toner image from said image carrier to a recording medium;

a drive source configured to output drive torque for driving said image carrier;

sensing means for sensing an angular displacement or an angular velocity of~~, among said plurality or rotary support bodies,~~ a driven rotary support body, from among said plurality of rotary support bodies, not contributing to transfer of the drive torque;

a belt drive control device configured to control, based on an output of said sensing means, rotation of~~, among said plurality of rotary support bodies,~~ a drive rotary support body, from among said plurality of rotary support bodies, to which the drive torque is transferred from said drive source, thereby controlling drive of said endless belt, said belt drive control

device detecting an angular displacement or an angular velocity of~~, among said plurality of rotary support bodies,~~ a driven rotary support body, from among said plurality of rotary support bodies, not contributing to transfer of the drive torque, and separating, from said detected angular displacement or said angular velocity ~~detected~~, an AC (alternating current) component of said angular displacement or said angular velocity having a frequency that corresponds to a periodic thickness variation of said endless belt in a circumferential direction; and

control means for controlling the rotation of said drive rotary support body in accordance with an amplitude and a phase of the AC component.

Claim 35 (Original): The apparatus as claimed in claim 34, wherein said control means is configured to process the AC component by taking account of a radius of said driven rotary support body, an effective belt thickness which is a reference for a speed at which part of said belt contacting said driven rotary support body moves, a radius of said drive rotary support body, an effective belt thickness which is a reference for a speed at which part of said belt contacting said drive rotary support body moves, and a period of time necessary for said belt to move from a center of a portion where said belt and said driven rotary support body contact to a center of a portion where said belt and said drive rotary support body contact.

Claim 36 (Original): The apparatus as claimed in claim 34, wherein said control means is configured to execute test drive of said belt while varying an amplitude and a phase of a reference signal used to control the rotation of said drive rotary support body, set the amplitude and the phase of the reference signal such that a difference between the AC component produced during said test drive and said reference signal becomes minimum, and

control the rotation of said drive rotary support body in accordance with a result of comparison of said reference signal, which is generated to have the amplitude and the phase set by said test drive, and said AC component.

Claim 37 (Original): The apparatus as claimed in claim 34, wherein said control means is configured to execute test drive that causes said drive rotary support body to rotate at a constant angular velocity by using a reference mark provided on said belt as a reference, store information representative of the amplitude and the phase of the AC component appeared over at least one period of the thickness variation of said belt in the circumferential direction during said test drive, generate a target reference signal on the basis of a result of detection of said reference mark and said information stored, and control the rotation of said drive rotary support body in accordance with a result of comparison of said target reference signal and said AC component.

Claim 38 (Original): The apparatus as claimed in claim 34, wherein said control means is configured to separate a plurality of AC components corresponding to the periodic variation of said belt and different in frequency from each other and control the rotation of said drive rotary support body in accordance with said plurality of AC components.

Claim 39 (Currently Amended): An image forming apparatus comprising:

an image carrier;

latent image forming means for forming a latent image on said image carrier;

developing means for developing the latent image to thereby produce a corresponding toner image;

an intermediate image transfer body comprising an endless belt passed over a plurality of rotary support bodies;

first image transferring means for transferring the toner image from said image carrier to said intermediate image transfer body;

second image transferring means for transferring the toner image from said intermediate image transfer body to a recording medium;

a drive source configured to output drive torque for driving said intermediate image transfer body;

sensing means for sensing an angular displacement or an angular velocity of~~, among said plurality or rotary support bodies,~~ a driven rotary support body, from among said plurality of rotary support bodies, not contributing to transfer of the drive torque;

a belt drive control device configured to control, based on an output of said sensing means, rotation of~~, among said plurality of rotary support bodies,~~ a drive rotary support body, from among said plurality of rotary support bodies, to which the drive torque is transferred from said drive source, thereby controlling drive of said intermediate image transfer body, said belt drive control device detecting an angular displacement or an angular velocity of~~, among said plurality of rotary support bodies,~~ a driven rotary support body, from among said plurality of rotary support bodies, not contributing to transfer of the drive torque, and separating, from said detected angular displacement or said angular velocity ~~detected~~, an AC (alternating current) component of said angular displacement or said angular velocity having a frequency that corresponds to a periodic thickness variation of said intermediate image transfer body in a circumferential direction; and

control means for controlling the rotation of said drive rotary support body in accordance with an amplitude and a phase of said AC component.

Claim 40 (Original): The apparatus as claimed in claim 39, wherein said control means is configured to process the AC component by taking account of a radius of said driven rotary support body, an effective belt thickness which is a reference for a speed at which part of said belt contacting said driven rotary support body moves, a radius of said drive rotary support body, an effective belt thickness which is a reference for a speed at which part of said belt contacting said drive rotary support body moves, and a period of time necessary for said belt to move from a center of a portion where said belt and said driven rotary support body contact to a center of a portion where said belt and said drive rotary support body contact.

Claim 41 (Original): The apparatus as claimed in claim 39, wherein said control means is configured to execute test drive of said belt while varying an amplitude and a phase of a reference signal used to control the rotation of said drive rotary support body, set the amplitude and the phase of the reference signal such that a difference between the AC component produced during said test drive and said reference signal becomes minimum, and control the rotation of said drive rotary support body in accordance with a result of comparison of said reference signal, which is generated to have the amplitude and the phase set by said test drive, and said AC component.

Claim 42 (Original): The apparatus as claimed in claim 39, wherein said control means is configured to execute test drive that causes said drive rotary support body to rotate at a constant angular velocity by using a reference mark provided on said belt as a reference, store information representative of the amplitude and the phase of the AC component appeared over at least one period of the thickness variation of said belt in the circumferential direction during said test drive, generate a target reference signal on the basis of a result of

detection of said reference mark and said information stored, and control the rotation of said drive rotary support body in accordance with a result of comparison of said target reference signal and said AC component.

Claim 43 (Original): The apparatus as claimed in claim 39, wherein said control means is configured to separate a plurality of AC components corresponding to the periodic variation of said belt and different in frequency from each other and control the rotation of said drive rotary support body in accordance with said plurality of AC components.

Claim 44 (Currently Amended): An image forming apparatus comprising:

an image carrier;

latent image forming means for forming a latent image on said image carrier;

developing means for developing the latent image to thereby produce a corresponding toner image;

a conveying member comprising an endless belt, which is passed over a plurality of rotary support bodies, for conveying a recording medium;

image transferring means for transferring the toner image from said image carrier to the recording medium, which is being conveyed by said conveying member, with or without intermediary of an intermediate image transfer body;

a drive source configured to output drive torque for driving said conveying member;

sensing means for sensing an angular displacement or an angular velocity of~~, among said plurality or rotary support bodies,~~ a driven rotary support body, from among said plurality of rotary support bodies, not contributing to transfer of the drive torque;

a belt drive control device configured to control, based on an output of said sensing means, rotation of~~, among said plurality of rotary support bodies,~~ a drive rotary support body,

from among said plurality of rotary support bodies, to which the drive torque is transferred from said drive source, thereby controlling drive of said conveying member, said belt drive control device detecting an angular displacement or an angular velocity of~~, among said plurality of rotary support bodies,~~ a driven rotary support body, from among said plurality of rotary support bodies, not contributing to transfer of the drive torque, and separating, from said detected angular displacement or said angular velocity ~~detected~~, an AC (alternating current) component of said angular displacement or said angular velocity having a frequency that corresponds to a periodic thickness variation of said conveying member in a circumferential direction; and

control means for controlling the rotation of said drive rotary support body in accordance with an amplitude and a phase of said AC component.

Claim 45 (Original): The apparatus as claimed in claim 44, wherein said control means is configured to process the AC component by taking account of a radius of said driven rotary support body, an effective belt thickness which is a reference for a speed at which part of said belt contacting said driven rotary support body moves, a radius of said drive rotary support body, an effective belt thickness which is a reference for a speed at which part of said belt contacting said drive rotary support body moves, and a period of time necessary for said belt to move from a center of a portion where said belt and said driven rotary support body contact to a center of a portion where said belt and said drive rotary support body contact.

Claim 46 (Original): The apparatus as claimed in claim 44, wherein said control means is configured to execute test drive of said belt while varying an amplitude and a phase of a reference signal used to control the rotation of said drive rotary support body, set the

amplitude and the phase of the reference signal such that a difference between the AC component produced during said test drive and said reference signal becomes minimum, and control the rotation of said drive rotary support body in accordance with a result of comparison of said reference signal, which is generated to have the amplitude and the phase set by said test drive, and said AC component.

Claim 47 (Original): The apparatus as claimed in claim 44, wherein said control means is configured to execute test drive that causes said drive rotary support body to rotate at a constant angular velocity by using a reference mark provided on said belt as a reference, store information representative of the amplitude and the phase of the AC component appeared over at least one period of the thickness variation of said belt in the circumferential direction during said test drive, generate a target reference signal on the basis of a result of detection of said reference mark and said information stored, and control the rotation of said drive rotary support body in accordance with a result of comparison of said target reference signal and said AC component.

Claim 48 (Original): The apparatus as claimed in claim 44, wherein said control means is configured to separate a plurality of AC components corresponding to the periodic variation of said belt and different in frequency from each other and control the rotation of said drive rotary support body in accordance with said plurality of AC components.

Claim 49 (Currently Amended): ~~In an image forming~~ <u>The</u> apparatus <u>as claimed in claim 34</u>, <u>wherein</u> a process cartridge comprises at least ~~an~~ <u>the</u> image carrier and [[a]] <u>the</u> belt drive control device and is removably mounted to a body of said image forming apparatus.

Claim 50 (Currently Amended): ~~In a~~ A program for controlling drive of an endless belt by controlling rotation of, from among a plurality of rotary support bodies over which said endless belt is passed, a drive rotary support body to which drive torque is transferred, comprising: ~~a step of~~ separating, from data representative of an angular displacement or an angular velocity of~~, among said plurality of rotary support bodies,~~ a driven rotary support body, from among said plurality of rotary support bodies, not contributing to transfer of said drive torque an AC (alternating current) component of said angular displacement or said angular velocity having a frequency that corresponds to a periodic thickness variation of said endless belt in a circumferential direction and ~~a step of~~ controlling rotation of said drive rotary support body in accordance with an amplitude and a phase of said AC component are executed by a computer.

Claim 51 (Currently Amended): The program as claimed in claim 50, wherein the ~~step of~~ processing the AC component is executed by the computer in consideration of a radius of said driven rotary support body, an effective belt thickness which is a reference for a speed at which part of said belt contacting said driven rotary support body moves, a radius of said drive rotary support body, an effective belt thickness which is a reference for a speed at which part of said belt contacting said drive rotary support body moves, and a period of time necessary for said belt to move from a center of a portion where said belt and said driven rotary support body contact to a center of a portion where said belt and said drive rotary support body contact.

Claim 52 (Currently Amended): The program as claimed in claim 50, wherein ~~a step of~~ executing test drive of said belt while varying an amplitude and a phase of a reference signal used to control the rotation of said drive rotary support body and setting the amplitude

and the phase of the reference signal such that a difference between the AC component produced during said test drive and said reference signal becomes minimum is executed by the computer, and

the rotation of said drive rotary support body is controlled in accordance with a result of comparison of said reference signal, which is generated to have the amplitude and the phase set by said test drive, and said AC component.

Claim 53 (Currently Amended): The program as claimed in claim 50, wherein ~~a step of~~ executing test drive that causes said drive rotary support body to rotate at a constant angular velocity by using a reference mark provided on said belt as a reference and storing information representative of the amplitude and the phase of the AC component appeared over at least one period of the thickness variation of said belt in the circumferential direction during said test drive and a step of generating a target reference signal on the basis of a result of detection of said reference mark and said information stored is executed by the computer, and

the rotation of said drive rotary support body is controlled in accordance with a result of comparison of said target reference signal and said AC component.

Claim 54 (Currently Amended): The program as claimed in claim 50, wherein the [[a]] plurality of AC components corresponding to the periodic variation of said belt and different in frequency from each other are separated, and the rotation of said drive rotary support body is controlled in accordance with said plurality of AC components.

Claim 55 (Currently Amended): ~~In a~~ A recording medium storing a program for controlling drive of an endless belt by controlling rotation of, from among a plurality of

rotary support bodies over which said endless belt is passed, a drive rotary support body to which drive torque is transferred, said program ~~causes~~ causing a computer to execute ~~a step of~~ separating, from data representative of an angular displacement or an angular velocity of~~,~~ ~~among said plurality of rotary support bodies,~~ a driven rotary support body, from among said plurality of rotary support bodies, not contributing to transfer of said drive torque an AC (alternating current) component of said angular displacement or said angular velocity having a frequency that corresponds to a periodic thickness variation of said endless belt in a circumferential direction and ~~a step of~~ controlling rotation of said drive rotary support body in accordance with an amplitude and a phase of said AC component are executed.

Claim 56 (New) A device for controlling drive of an endless belt by controlling rotation of, from among a plurality of rotary support bodies over which said endless belt is passed, a drive rotary support body to which drive torque is transferred, comprising:

a controller configured to detect an angular displacement or an angular velocity of a driven rotary support body, from among said plurality of rotary support bodies, not contributing to transfer of the drive torque, to separate, from said detected angular displacement or said angular velocity, an AC (alternating current) component of said angular displacement or said angular velocity having a frequency that corresponds to a periodic thickness variation of said endless belt in a circumferential direction, and to control the rotation of said drive rotary support body in accordance with an amplitude and a phase of said AC component.

Claim 57 (New): The device as claimed in claim 56, wherein said controller is configured to separate a plurality of AC components corresponding to the periodic variation

of said belt and different in frequency from each other and control the rotation of said drive rotary support body in accordance with said plurality of AC components.

Claim 58 (New): The device as claimed in claim 56, wherein said controller is configured to execute test drive that causes said drive rotary support body to rotate at a constant angular velocity by using a reference mark provided on said belt as a reference, store information representative of the amplitude and the phase of the AC component appeared over at least one period of the thickness variation of said belt in the circumferential direction during said test drive, generate a target reference signal on the basis of a result of detection of said reference mark and said information stored, and control the rotation of said drive rotary support body in accordance with a result of comparison of said target reference signal and said AC component.

Claim 59 (New): The device as claimed in claim 58, wherein said controller is configured to separate a plurality of AC components corresponding to the periodic variation of said belt and different in frequency from each other and control the rotation of said drive rotary support body in accordance with said plurality of AC components.

Claim 60 (New): The device as claimed in claim 56, wherein said controller is configured to execute test drive of said belt while varying an amplitude and a phase of a reference signal used to control the rotation of said drive rotary support body, set the amplitude and the phase of the reference signal such that a difference between the AC component produced during said test drive and said reference signal becomes minimum, and control the rotation of said drive rotary support body in accordance with a result of

comparison of said reference signal, which is generated to have the amplitude and the phase set by said test drive, and said AC component.

Claim 61 (New): The device as claimed in claim 60, wherein said controller is configured to separate a plurality of AC components corresponding to the periodic variation of said belt and different in frequency from each other and control the rotation of said drive rotary support body in accordance with said plurality of AC components.

Claim 62 (New): The device as claimed in claim 56, wherein said controller is configured to process the AC component by taking account of a radius of said driven rotary support body, an effective belt thickness which is a reference for a speed at which part of said belt contacting said driven rotary support body moves, a radius of said drive rotary support body, an effective belt thickness which is a reference for a speed at which part of said belt contacting said drive rotary support body moves, and a period of time necessary for said belt to move from a center of a portion where said belt and said driven rotary support body contact to a center of a portion where said belt and said drive rotary support body contact.

Claim 63 (New): The device as claimed in claim 62, wherein said controller is configured to separate a plurality of AC components corresponding to the periodic variation of said belt and different in frequency from each other and control the rotation of said drive rotary support body in accordance with said plurality of AC components.

Claim 64 (New): The device as claimed in claim 62, wherein said controller is configured to execute test drive that causes said drive rotary support body to rotate at a constant angular velocity by using a reference mark provided on said belt as a reference, store

information representative of the amplitude and the phase of the AC component appeared over at least one period of the thickness variation of said belt in the circumferential direction during said test drive, generate a target reference signal on the basis of a result of detection of said reference mark and said information stored, and control the rotation of said drive rotary support body in accordance with a result of comparison of said target reference signal and said AC component.

Claim 65 (New): The device as claimed in claim 64, wherein said controller is configured to separate a plurality of AC components corresponding to the periodic variation of said belt and different in frequency from each other and control the rotation of said drive rotary support body in accordance with said plurality of AC components.

Claim 66 (New): The device as claimed in claim 62, wherein said controller is configured to execute test drive of said belt while varying an amplitude and a phase of a reference signal used to control the rotation of said drive rotary support body, set the amplitude and the phase of the reference signal such that a difference between the AC component produced during said test drive and said reference signal becomes minimum, and control the rotation of said drive rotary support body in accordance with a result of comparison of said reference signal, which is generated to have the amplitude and the phase set by said test drive, and said AC component.

Claim 67 (New): The device as claimed in claim 66, wherein said controller is configured to separate a plurality of AC components corresponding to the periodic variation of said belt and different in frequency from each other and control the rotation of said drive rotary support body in accordance with said plurality of AC components.

Claim 68 (New): A belt device comprising:

an endless belt passed over a plurality of rotary support bodies;

a drive source configured to output drive torque for driving said endless belt;

a sensor configured to sense an angular displacement or an angular velocity of, from among said plurality of rotary support bodies, a driven rotary support body not contributing to transfer of the drive torque; and

a belt drive control device configured to control, based on an output of said sensing means, rotation of a drive rotary support body, from among said plurality of rotary support bodies, to which the drive torque is transferred from said drive source, thereby controlling drive of said endless belt;

said belt drive control device comprising:

a controller configured to separate, from the angular displacement or the angular velocity sensed by said sensor, an AC (alternating current) component of said angular displacement or said angular velocity having a frequency that corresponds to a periodic thickness variation of said endless belt in a circumferential direction, and to control the rotation of said drive rotary support body in accordance with an amplitude and a phase of said AC component.

Claim 69 (New): The device as claimed in claim 68, wherein said drive rotary support body and said driven rotary support body have a same radius.

Claim 70 (New): The device as claimed in claim 69, wherein a distance by which said belt moves from a center of a portion where said belt and said driven rotary support body contact to a center of a portion where said belt and said drive rotary support body contact is

an odd multiple of a length corresponding to one-half of a period of the thickness variation of said belt in the circumferential direction.

Claim 71 (New): The device as claimed in claim 68, wherein said drive rotary support body and said driven rotary support body are different in radius from each other, and

a distance by which said belt moves from a center of a portion where said belt and said driven rotary support body contact to a center of a portion where said belt and said drive rotary support body contact is an even multiple of a length corresponding to one-half of a period of the thickness variation of said belt in the circumferential direction.

Claim 72 (New): The device as claimed in claim 68, wherein said sensor is mounted on one of a plurality of driven rotary support bodies located at a position little susceptible to the thickness variation ascribable to temperature.

Claim 73 (New): The device as claimed in claim 68, wherein said belt comprises a photoconductive belt for use in an image forming apparatus.

Claim 74 (New): The device as claimed in claim 68, wherein said belt comprises an intermediate image transfer belt for use in an image forming apparatus.

Claim 75 (New): The device as claimed in claim 68, wherein said belt comprises a belt included in an image forming apparatus for conveying a recording medium to a position where an image is to be transferred from an image carrier to said recording medium.

Claim 76 (New): The device as claimed in claim 68, wherein said belt comprises a belt included in an image forming apparatus for conveying a recording medium to a position where an image is to be transferred from an intermediate image transfer body to said recording medium.

Claim 77 (New): An image forming apparatus comprising:

an image carrier comprising an endless belt passed over a plurality of rotary support bodies;

a latent image forming device configured to form a latent image on said image carrier;

a developer configured to develop the latent image to thereby produce a corresponding toner image;

an image transfer device configured to transfer the toner image from said image carrier to a recording medium;

a drive source configured to output drive torque for driving said image carrier;

a sensor configured to sense an angular displacement or an angular velocity of a driven rotary support body, from among said plurality of rotary support bodies, not contributing to transfer of the drive torque;

a belt drive control device configured to control, based on an output of said sensor, rotation of a drive rotary support body, from among said plurality of rotary support bodies, to which the drive torque is transferred from said drive source, thereby controlling drive of said endless belt, said belt drive control device detecting an angular displacement or an angular velocity of a driven rotary support body, from among said plurality of rotary support bodies, not contributing to transfer of the drive torque, and separating, from said detected angular displacement or said angular velocity, an AC (alternating current) component of said angular

displacement or said angular velocity having a frequency that corresponds to a periodic thickness variation of said endless belt in a circumferential direction; and

a controller configured to control the rotation of said drive rotary support body in accordance with an amplitude and a phase of the AC component.

Claim 78 (New): The apparatus as claimed in claim 77, wherein said controller is configured to process the AC component by taking account of a radius of said driven rotary support body, an effective belt thickness which is a reference for a speed at which part of said belt contacting said driven rotary support body moves, a radius of said drive rotary support body, an effective belt thickness which is a reference for a speed at which part of said belt contacting said drive rotary support body moves, and a period of time necessary for said belt to move from a center of a portion where said belt and said driven rotary support body contact to a center of a portion where said belt and said drive rotary support body contact.

Claim 79 (New): The apparatus as claimed in claim 77, wherein said controller is configured to execute test drive of said belt while varying an amplitude and a phase of a reference signal used to control the rotation of said drive rotary support body, set the amplitude and the phase of the reference signal such that a difference between the AC component produced during said test drive and said reference signal becomes minimum, and control the rotation of said drive rotary support body in accordance with a result of comparison of said reference signal, which is generated to have the amplitude and the phase set by said test drive, and said AC component.

Claim 80 (New): The apparatus as claimed in claim 77, wherein said controller is configured to execute test drive that causes said drive rotary support body to rotate at a

constant angular velocity by using a reference mark provided on said belt as a reference, store information representative of the amplitude and the phase of the AC component appeared over at least one period of the thickness variation of said belt in the circumferential direction during said test drive, generate a target reference signal on the basis of a result of detection of said reference mark and said information stored, and control the rotation of said drive rotary support body in accordance with a result of comparison of said target reference signal and said AC component.

Claim 81 (New): The apparatus as claimed in claim 77, wherein said controller is configured to separate a plurality of AC components corresponding to the periodic variation of said belt and different in frequency from each other and control the rotation of said drive rotary support body in accordance with said plurality of AC components.

Claim 82 (New): An image forming apparatus comprising:

an image carrier;

a latent image forming device configured to form a latent image on said image carrier;

a developer configured to develop the latent image to thereby produce a corresponding toner image;

an intermediate image transfer body comprising an endless belt passed over a plurality of rotary support bodies;

a first image transfer device configured to transfer the toner image from said image carrier to said intermediate image transfer body;

a second image transfer device configured to transfer the toner image from said intermediate image transfer body to a recording medium;

a drive source configured to output drive torque for driving said intermediate image transfer body;

a sensor configured to sense an angular displacement or an angular velocity of a driven rotary support body, from among said plurality of rotary support bodies, not contributing to transfer of the drive torque;

a belt drive control device configured to control, based on an output of said sensor, rotation of a drive rotary support body, from among said plurality of rotary support bodies, to which the drive torque is transferred from said drive source, thereby controlling drive of said intermediate image transfer body, said belt drive control device detecting an angular displacement or an angular velocity of a driven rotary support body, from among said plurality of rotary support bodies, not contributing to transfer of the drive torque, and separating, from said detected angular displacement or said angular velocity, an AC (alternating current) component of said angular displacement or said angular velocity having a frequency that corresponds to a periodic thickness variation of said intermediate image transfer body in a circumferential direction; and

a controller configured to control the rotation of said drive rotary support body in accordance with an amplitude and a phase of said AC component.

Claim 83 (New): The apparatus as claimed in claim 82, wherein said controller is configured to process the AC component by taking account of a radius of said driven rotary support body, an effective belt thickness which is a reference for a speed at which part of said belt contacting said driven rotary support body moves, a radius of said drive rotary support body, an effective belt thickness which is a reference for a speed at which part of said belt contacting said drive rotary support body moves, and a period of time necessary for said belt

to move from a center of a portion where said belt and said driven rotary support body contact to a center of a portion where said belt and said drive rotary support body contact.

Claim 84 (New): The apparatus as claimed in claim 82, wherein said controller is configured to execute test drive of said belt while varying an amplitude and a phase of a reference signal used to control the rotation of said drive rotary support body, set the amplitude and the phase of the reference signal such that a difference between the AC component produced during said test drive and said reference signal becomes minimum, and control the rotation of said drive rotary support body in accordance with a result of comparison of said reference signal, which is generated to have the amplitude and the phase set by said test drive, and said AC component.

Claim 85 (New): The apparatus as claimed in claim 82, wherein said controller is configured to execute test drive that causes said drive rotary support body to rotate at a constant angular velocity by using a reference mark provided on said belt as a reference, store information representative of the amplitude and the phase of the AC component appeared over at least one period of the thickness variation of said belt in the circumferential direction during said test drive, generate a target reference signal on the basis of a result of detection of said reference mark and said information stored, and control the rotation of said drive rotary support body in accordance with a result of comparison of said target reference signal and said AC component.

Claim 86 (New): The apparatus as claimed in claim 82, wherein said controller is configured to separate a plurality of AC components corresponding to the periodic variation

of said belt and different in frequency from each other and control the rotation of said drive rotary support body in accordance with said plurality of AC components.

Claim 87 (New): An image forming apparatus comprising:

an image carrier;

a latent image forming device configured to form a latent image on said image carrier;

a developer configured to develop the latent image to thereby produce a corresponding toner image;

a conveying member comprising an endless belt, which is passed over a plurality of rotary support bodies, for conveying a recording medium;

an image transfer device configured to transfer the toner image from said image carrier to the recording medium, which is being conveyed by said conveying member, with or without intermediary of an intermediate image transfer body;

a drive source configured to output drive torque for driving said conveying member;

a sensor configured to sense an angular displacement or an angular velocity of a driven rotary support body, from among said plurality of rotary support bodies, not contributing to transfer of the drive torque;

a belt drive control device configured to control, based on an output of said sensor, rotation of a drive rotary support body, from among said plurality of rotary support bodies, to which the drive torque is transferred from said drive source, thereby controlling drive of said conveying member, said belt drive control device detecting an angular displacement or an angular velocity of a driven rotary support body, from among said plurality of rotary support bodies, not contributing to transfer of the drive torque, and separating, from said detected angular displacement or said angular velocity, an AC (alternating current) component of said

angular displacement or said angular velocity having a frequency that corresponds to a periodic thickness variation of said conveying member in a circumferential direction; and

a controller configured to control the rotation of said drive rotary support body in accordance with an amplitude and a phase of said AC component.

Claim 88 (New): The apparatus as claimed in claim 87, wherein said controller is configured to process the AC component by taking account of a radius of said driven rotary support body, an effective belt thickness which is a reference for a speed at which part of said belt contacting said driven rotary support body moves, a radius of said drive rotary support body, an effective belt thickness which is a reference for a speed at which part of said belt contacting said drive rotary support body moves, and a period of time necessary for said belt to move from a center of a portion where said belt and said driven rotary support body contact to a center of a portion where said belt and said drive rotary support body contact.

Claim 89 (New): The apparatus as claimed in claim 57, wherein said controller is configured to execute test drive of said belt while varying an amplitude and a phase of a reference signal used to control the rotation of said drive rotary support body, set the amplitude and the phase of the reference signal such that a difference between the AC component produced during said test drive and said reference signal becomes minimum, and control the rotation of said drive rotary support body in accordance with a result of comparison of said reference signal, which is generated to have the amplitude and the phase set by said test drive, and said AC component.

Claim 90 (New): The apparatus as claimed in claim 87, wherein said controller is configured to execute test drive that causes said drive rotary support body to rotate at a

constant angular velocity by using a reference mark provided on said belt as a reference, store information representative of the amplitude and the phase of the AC component appeared over at least one period of the thickness variation of said belt in the circumferential direction during said test drive, generate a target reference signal on the basis of a result of detection of said reference mark and said information stored, and control the rotation of said drive rotary support body in accordance with a result of comparison of said target reference signal and said AC component.

Claim 91 (New): The apparatus as claimed in claim 87, wherein said controller is configured to separate a plurality of AC components corresponding to the periodic variation of said belt and different in frequency from each other and control the rotation of said drive rotary support body in accordance with said plurality of AC components.

Claim 92 (New): The apparatus as claimed in claim 77, wherein a process cartridge comprises at least the image carrier and the belt drive control device and is removably mounted to a body of said image forming apparatus.